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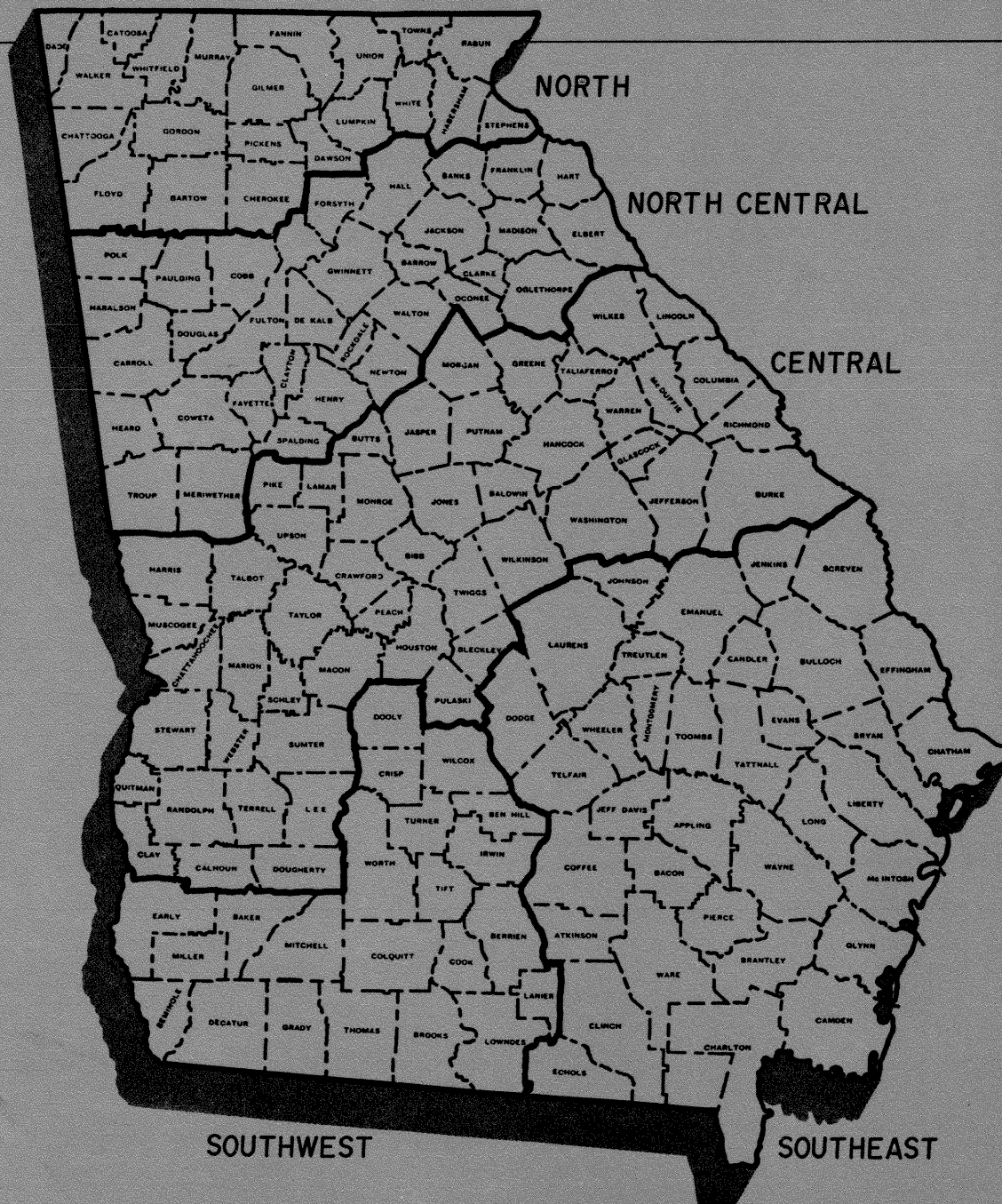


Southeastern Forest
Experiment Station

Georgia's Timber Industry: An Assessment of Timber Product Output and Use, 1992

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Foreword

This report contains the findings of a 1992 canvass of all primary wood-using plants in Georgia and presents changes in product output and residue use since 1989. It complements the Forest Inventory and Analysis periodic inventory of volume and removals from the State's timberland. The canvass was conducted to determine the amount and source of wood receipts and annual timber product drain by county in 1992 and to determine interstate and cross-regional movement of industrial roundwood. Only primary wood-using mills were canvassed. Primary mills are those that process roundwood in log or bolt form or as chipped roundwood. Examples of industrial roundwood products are saw logs, pulpwood, veneer logs, poles, and logs used for composite board products. Mills producing products from residues generated at primary and secondary processors were not canvassed. Trees chipped in the woods were included in the estimate of timber drain only if they were delivered to a primary domestic manufacturer.

A 100-percent canvass of all wood-processors in Georgia was conducted in 1993 for 1992. Out-of-State mills known to be using logs or bolts harvested from Georgia timberland were also contacted. Each mill was canvassed by mail or through

personal contact at plant locations. Telephone contacts followed mailed questionnaire responses when additional information or clarification of response was necessary. In the event of a nonresponse, data collected in previous surveys were updated by current data collected for mills of similar size, product type, and location.

Pulpwood production data were taken from an annual canvass of all southeastern pulpmills, conducted annually in cooperation with the American Pulpwood Association. Medium density fiberboard, insulating board, and hardboard plants were included in this survey.

Previous surveys for all other timber products began in 1961, and are currently conducted every 3 years.

The Southeastern Station gratefully acknowledges the cooperation and assistance provided by the Georgia Forestry Commission in collecting mill data and to forest industry and mill managers for providing timber products information. The information in this report is based on responses from 83 percent of mills operating in 1992: 12 pulpmills, 14 veneer mills, 4 composite panel mills, 36 of the 40 mills manufacturing other industrial products, and 140 of the 178 sawmills. They accounted for 95 percent of the 1992 mill receipts.

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Output of Industrial Timber Products

Georgia, Oregon, and Washington are the top three producers of industrial timber products. According to 1992 estimates from the Georgia Forestry Commission, the forest industry employed more than 73,000 people and contributed \$5.7 billion to the economy, making it the largest industry in the State. Between 1989 and 1992, the combined output of industrial roundwood timber products and plant byproducts increased 15 percent from 1.5 to 1.8 billion cubic feet. Timber product output (TPO) from roundwood was up 116 million cubic feet to 1.2 billion cubic feet (table 1). Output from plant byproducts increased nearly 115 million cubic feet to 525 million cubic feet, 30 percent of total output (tables 1 and 12). Output of softwood roundwood products increased 11 percent to 1.0 billion cubic feet. Softwoods accounted for 83 percent of Georgia's total output of roundwood products. Hardwood roundwood production was up by 7 percent to 208 million cubic feet.

Pulpwood and saw logs were the principal roundwood products in 1992. Combined output for these two products amounted to nearly 1.1 billion cubic feet, 85 percent of the State's total roundwood output.

Pulpwood

Pulpwood remains the leading roundwood product in Georgia, consistent with most of the Southeast. Georgia had the highest rate of woodpulp production in the United States in 1990, with 7.03 million short tons; and the highest rate of paperboard production, at 4.65 million tons (Page 1993). The State had more than 200 paper and allied products manufacturers, which employ nearly 29,000 people.

Output of pulpwood (including chipped roundwood) increased from 516 million cubic feet (6.9 million cords) in 1989 to 548 million cubic feet (7.5 million cords) in 1992 (table 1). Pulpwood production accounted for 44 percent of the State's total roundwood output. Both softwood and hardwood output increased between 1989 and 1992 (fig. 1). Softwood output increased by 5 percent to 428 million cubic feet, while hardwood output was up 11 percent to 120 million cubic feet. Hardwood continues to provide an increasingly larger share of total pulpwood production. In 1971, hardwood accounted for only 11 percent of the State's pulpwood production, compared with 22 percent in 1992. Softwoods accounted for 78 percent of Georgia's pulpwood production in 1992, down 1 percent from 1989.

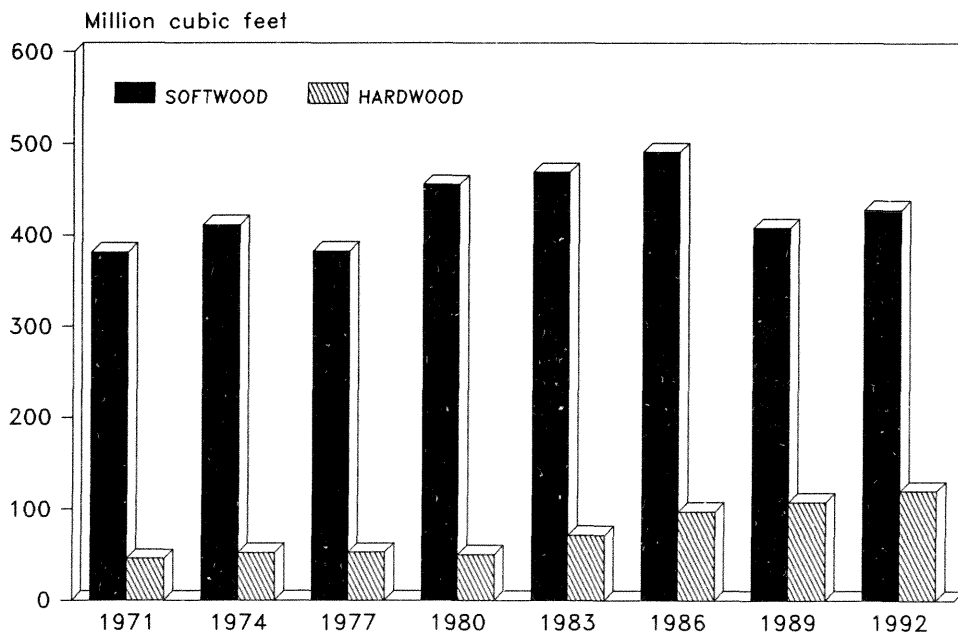


Figure 1—Roundwood pulpwood production, by species group and year.

Saw Logs

Saw-log production was close behind pulpwood in roundwood production, accounting for 41 percent of the State's total roundwood products output in 1992. Combined output of softwood and hardwood saw-log production in 1992 totaled 506 million cubic feet, up almost 7 percent since 1989. Output of softwood saw logs increased 9 percent since 1989 and totaled 444 million cubic feet (2.4 billion board feet). Hardwood saw-log production continued to decline, dropping 5 percent to 62 million cubic feet (355 million board feet). Hardwoods accounted for 19 percent of the saw-log production in 1971, 14 percent in 1989, and 12 percent in 1992 (fig. 2). Southern yellow pine accounted for 98 percent of the softwood saw logs harvested in the State in 1992, while oaks made up 47 percent of the hardwood saw-log output.

Veneer Logs

Output of veneer logs in 1992 totaled 73 million cubic feet, an 11-percent decline since 1989. Veneer production accounted for 6 percent of the State's total roundwood TPO output volume in 1992. With pine plywood the principal product, softwoods continued to dominate the veneer industry in Georgia, even though output of softwood veneer logs dropped 21 percent to 55 million cubic feet (337 million board feet). Softwoods accounted for 76 percent of the State's veneer production, compared with 84 percent in 1989. Softwood veneer production has remained relatively stable since 1983 (fig. 3). In contrast, output of hardwood veneer logs increased 38 percent to 18 million cubic feet (109 million board feet), the highest level recorded since 1961. This reflects the increased use of hardwood for interior plys in pine plywood. About 64 percent of the hardwood production was used for interior plys in pine plywood compared with 35 percent in 1989 (Tansey and Steppleton 1991). Yellow-poplar supplied 53 percent of the hardwood veneer-log volume, while sweetgum accounted for another 38 percent. Southern yellow pine accounted for all of the softwood roundwood harvested for veneer.

Composite Panels

Between 1989 and 1992, roundwood harvested from Georgia's forests for composite panels increased 69 percent and totaled nearly 45 million cubic feet. All of this volume was used in the production of oriented strand board (OSB) in Georgia mills and made up 4 percent of the State's total roundwood TPO volume in 1992. Softwood output nearly doubled to 38 million cubic feet and accounted for 85 percent of

composite panel production. Hardwood production declined 4 percent. Yellow pine accounted for 97 percent of the softwood volume used in composite panels. Sweetgum and yellow-poplar accounted for 63 and 26 percent, respectively, of the hardwood volume cut for OSB.

Other Industrial Products

Roundwood harvested for other industrial uses such as poles, posts, mulch, firewood, logs for log homes, excelsior, and all other industrial products totaled 58 million cubic feet in 1992, almost a fourfold increase since 1989. This large increase reflects a boost in production of poles and posts in the State. Between 1989 and 1992, pole production increased from 10 to 38 million cubic feet, and post production went from 2 to 16 million cubic feet. Softwoods made up 98 percent of the other industrial product volume. Hardwood volume used for other industrial products increased from 11,000 cubic feet in 1989 to 889,000 cubic feet in 1992. Roundwood used for other industrial products in 1992 accounted for 5 percent of the total volume of all products compared with only 1 percent of Georgia's total TPO in 1989.

Number of Mills and Receipts

The number of primary roundwood-using plants in Georgia increased from 231 in 1989 to 250 in 1992, an 8-percent increase (table 2). This somewhat reverses a general downward trend since 1971. Total receipts at Georgia mills, which include roundwood harvested and retained in the State and roundwood imported from other States, increased by 13 percent to 1.3 billion cubic feet (table 3).

Pulpmills. Page (1993) reported 19 pulpmill facilities in business in Georgia. Of these, 13 were operating and receiving roundwood in 1992, one less than in 1989.

The others rely on pulp from a primary manufacturer or on recycled material. In fact, Georgia is home to one of the world's largest producers of recycled newsprint. At the same time, the State's total pulpwood receipts were up by 5 percent to 562 million cubic feet and the 24-hour pulping capacity for these mills increased from 19,965 tons to 21,397 tons (Miller 1994). Receipts of round pulpwood in 1992 accounted for 44 percent of total receipts for all mills (table 4). Softwood receipts were up 5 percent to 431 million cubic feet, while hardwood receipts increased 4 percent to 130 million cubic feet. Softwoods accounted for 77 percent of the pulpwood receipts.

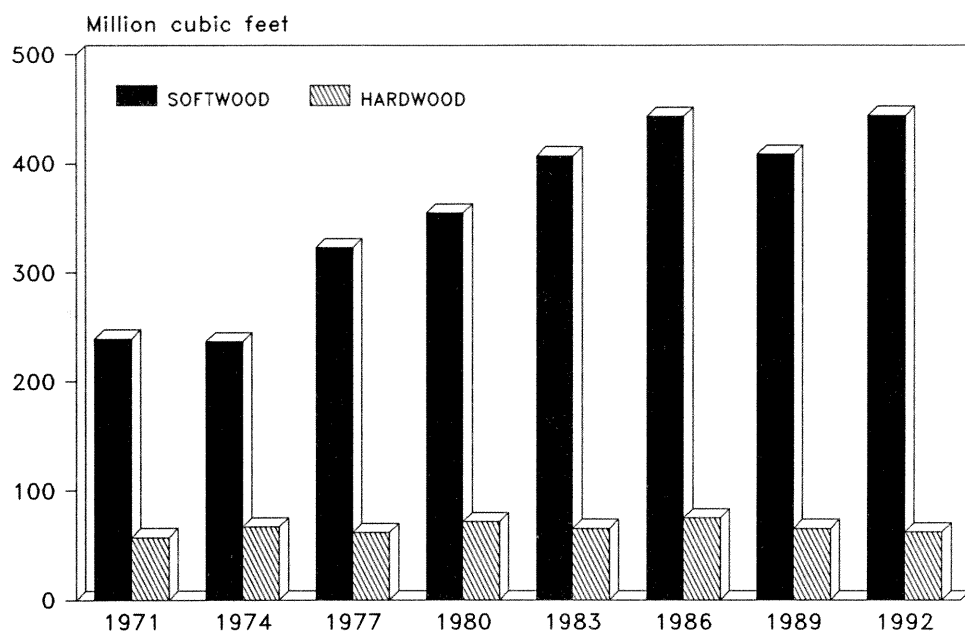


Figure 2—Roundwood saw-log production, by species group and year.

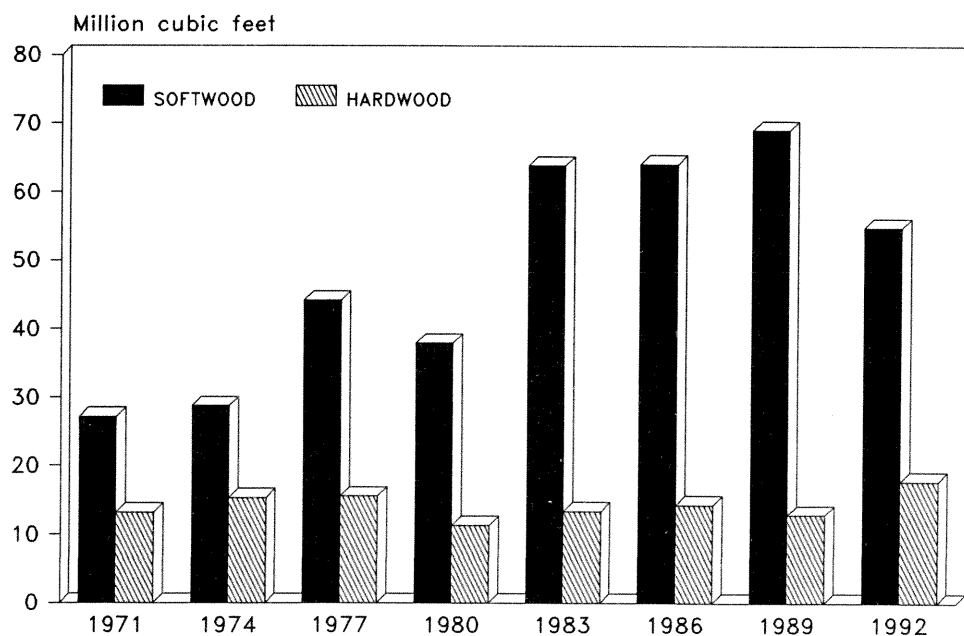


Figure 3—Roundwood veneer-log production, by species group and year.

Roundwood Movement

Sawmills. Georgia had a net gain of six sawmills between 1989 and 1992. However, this small increase masks many changes in the industry over the past 3 years: the startup of 29 sawmills with combined receipts of more than 105 million board feet, and the closing of 23 sawmills with total receipts of 108 million board feet. Total saw-log receipts increased 58 million cubic feet to 537 million cubic feet, a 12-percent gain since 1989. In 1992, sawmill receipts accounted for 42 percent of total receipts. Softwood saw-log receipts increased 15 percent to 476 million cubic feet, while those of hardwoods declined 6 percent to 61 million cubic feet. Yellow pine accounted for 87 percent of the State's total saw-log receipts. For the 178 mills currently operating, 26 percent had receipts of more than 10 million board feet.

Veneer Mills. The number of veneer mills operating in Georgia dropped from 16 to 14 between 1989 and 1992. Receipts at the remaining mills across the State declined more than 4 million cubic feet, or about 6 percent, to 74 million cubic feet. All of the decline was in receipts of softwood veneer logs, which fell 14 percent to 55 million cubic feet. In contrast, hardwood veneer receipts were up 32 percent to 19 million cubic feet. Most of the softwood veneer-log receipts were Southern yellow pine used to manufacture plywood. Sweetgum and yellow-poplar made up the bulk of hardwood veneer logs, with 64 percent of these logs used for the manufacture of plywood. Veneer accounted for about 6 percent of Georgia's total receipts for all products.

Composite Panel Mills. Four OSB mills were operating in Georgia in 1992, one more than in 1989. Total receipts for these mills were 48 million cubic feet, or about 4 percent of the State's total receipts. Softwood receipts for composite panel totaled 39 million cubic feet and hardwood receipts totaled 9 million cubic feet. Softwoods accounted for 81 percent of the composite panel receipts.

Other Industrial Mills. The number of plants producing other industrial products increased from 26 to 41 since 1989. Georgia's 9 new pole mills and 1 new post mill join existing facilities to bring the total to 26 pole and post mills. Two mulch mills, two shavings mills, and six firewood processors have also opened since 1989. Receipts at the current mills totaled 62 million cubic feet. Southern yellow pine accounted for 97 percent of total receipts.

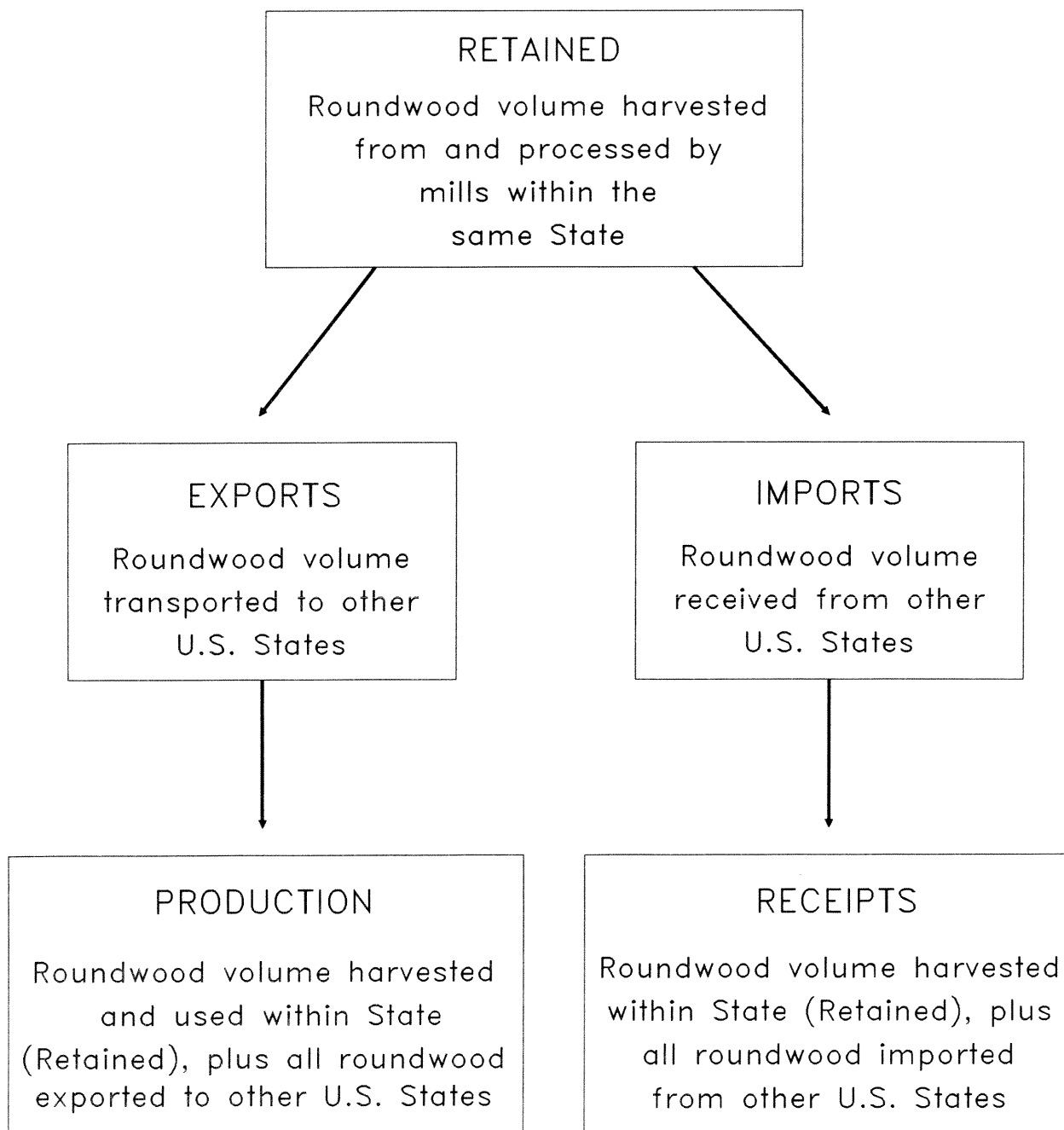
Note: To follow the logic of this section, the reader must understand that certain terms—namely, production, retained, export, import, and receipts—have specialized meanings and relationships unique to the Forest Inventory and Analysis Unit in Asheville, NC (fig. 4).

Georgia continues to be a net importer of industrial roundwood. In 1992, the State retained 1.1 billion cubic feet, or 89 percent of its production (table 5). Imports from other States totaled 186 million cubic feet, a 37-percent increase from 1989. Exports to mills outside Georgia amounted to 134 million cubic feet, up 17 percent. Imports of all softwood products exceeded exports by 39 million cubic feet, and hardwood imports exceeded exports by 13 million cubic feet.

The volume of whole trees cut or trees chipped in the woods and delivered to chip facilities for export overseas is not included in the estimate of export volume or roundwood production. Most of this volume is hardwood chips destined for wood fiber companies in Japan, Korea, and Taiwan. The result is an underestimate of hardwood volume produced or exported from Georgia. The volume of hardwood chips exported from Southern U.S. ports in 1992 was more than 3.0 million green metric tons, or about 89 million cubic feet (West 1993), compared with 1 million green metric tons in 1990 (Colquitt 1991). Dealers active in the export market have indicated that roundwood from Georgia contributed at least 500,000 green metric tons (14 million cubic feet) to the 1992 total, equivalent to less than 7 percent of total hardwood production.

Roundwood pulpwood accounted for 82 percent of total known exports and 66 percent of total imports (table 6). Round pulpwood imports amounted to nearly 124 million cubic feet, or 14 million cubic feet more than was exported. Saw logs accounted for the next largest share, 24 percent, of the import total while accounting for only 11 percent of the export total.

Saw Logs. Georgia retained 97 percent of its saw-log production for domestic manufacture (table 7), about the same proportion reported in 1989. However, the State remains a net importer of saw logs. About 46 million cubic feet of saw logs were imported, with softwoods making up 95 percent of the imports. Georgia mills received saw logs from South Carolina (53 percent), Florida (29 percent), Alabama (16 percent), Tennessee (2 percent), and North Carolina (negligible). Saw-log exports of nearly 15 million cubic feet were divided among South Carolina (48 percent),



$$\text{Production} = \text{Retained} + \text{Exports} \quad \text{Receipts} = \text{Retained} + \text{Imports}$$

Figure 4—Movement of roundwood exports and imports within the United States.

Florida (39 percent), and North Carolina (13 percent). Softwoods accounted for nearly 76 percent of the saw-log exports.

Veneer Logs. Georgia retained 91 percent of its veneer log production for processing at domestic veneer mills (table 8). Imports amounted to more than 8 million cubic feet, while exports totaled about 7 million cubic feet, making the State a net importer of roundwood veneer logs. Sources of the imports were Alabama (56 percent), Florida (38 percent), and North and South Carolina (3 percent each). Softwoods accounted for most of the State's veneer-log movement into other States; Florida was the recipient of 92 percent of this volume.

Pulpwood. About 80 percent of roundwood cut for pulpwood was retained for processing at Georgia pulpmills (table 9). Imports of 124 million cubic feet exceeded exports by 12 percent, making the State a net importer of pulpwood. Imports came primarily from Alabama (42 percent), South Carolina (31 percent), and Florida (26 percent); only about 1 percent came from Virginia, Tennessee, and Mississippi combined. Exports totaling 110 million cubic feet went to Florida (52 percent), Alabama (33 percent), North Carolina (3 percent), Tennessee (11 percent), and South Carolina (1 percent).

Composite Panels. All of the roundwood production harvested for composite panel was retained for processing at Georgia OSB mills (table 10). In addition, nearly 3 million cubic feet was imported from Florida. Most of this volume was hardwood.

Other Industrial. Georgia was also a net importer of roundwood used for other industrial products (table 11). All of the 6 million cubic feet imported for other industrial products were softwood. Almost 77 percent of the imports came from Florida, 22 percent from South Carolina, and 1 percent from Alabama. Softwood accounted for all of the 2 million cubic feet exported for other industrial products. Most of these exports (88 percent) went to mills in Florida, with the remainder going to mills in South Carolina.

Plant Byproducts

In 1992, processing of primary products in Georgia mills generated nearly 525 million cubic feet of wood and bark residues (table 12). Coarse residues from all primary products amounted to more than 212 million cubic feet, while bark volume totaled 170 million cubic feet. Collectively, sawdust and shavings made up 27 percent of total residues, or 142 million cubic feet.

Of the mill residues generated, 87 percent was from the processing of softwoods and 13 percent from hardwoods. Virtually all of the residues generated, both softwood and hardwood, became products or industrial fuel (table 13). Nearly 166 million cubic feet, or 78 percent of the coarse residues, were used for fiber products, while 31 million cubic feet were used for industrial fuel. The remainder were used for sawn products and other miscellaneous products. Most of the bark was used for industrial fuel or other miscellaneous products. Almost 66 percent of the sawdust and shavings were used for industrial fuel, 22 percent were used in the manufacture of particleboard, and 6 percent each for fiber products and other miscellaneous products.

Saw Logs. In 1992, sawmills generated 335 million cubic feet of mill residues accounting for 64 percent of the total residues produced (table 12). Most of the 161 million cubic feet of coarse residues from saw logs were used for fiber products. Bark and sawdust generated was 133 million cubic feet and was used mostly for industrial fuel and miscellaneous products. Shavings from dressed lumber totaled 41 million cubic feet. Almost 54 percent of this material was used for the manufacture of particleboard, 34 percent for industrial fuel, 9 percent for mulch, bedding, and other miscellaneous uses, and the remainder was used for fiber products.

Veneer Logs. Veneer mills generated more than 45 million cubic feet of residues of all types in 1992, about 9 percent of the State's total primary mill residue volume. Nearly 40 percent of the 22 million cubic feet of coarse veneer residues were veneer cores, which were sawn into framing studs or landscape timbers. The slabs from these cores, along with other coarse residues, were chipped for use in fiber products. Sawdust and bark, totaling 24 million cubic feet, were used mostly for industrial fuel.

Composite Panels. Bark was the only residue associated with roundwood pulpwood or OSB mills. Bark volumes reported from the 13 pulpmills and 4 OSB mills in Georgia totaled 66 million cubic feet. Most was converted to fuel by the same mills that produced it. Bark from roundwood pulpwood and OSB accounted for 39 percent of the total bark volume at all primary mills.

Other Industrial. Residues of all types from other industrial products totaled 78 million cubic feet, almost 15 percent of Georgia's total mill residue volume. Coarse residues of nearly 30 million cubic feet were used mainly for mulch, fuel, and fiber products. Sawdust and bark, totaling 48 million cubic feet, were used mostly for industrial fuel and mulch.

Regional Trends

Between 1989 and 1992, output of industrial roundwood products increased in all but the North Georgia Region; the Southeast Georgia Region had the largest increase, 17 percent. Output for all softwood products increased substantially in the Southeast and Central Regions, but remained stable or declined in the Southwest, North Central, and North Georgia Regions. Changes in output varied considerably by product and by region; however for three of the five regions, softwoods accounted for more than 80 percent of the total TPO.

Southeast Region

Roundwood output from the 35 counties of the Southeast Georgia Region totaled 501 million cubic feet in 1992, up 17 percent from 1989 (table 14). Increases in the production of softwood saw logs, softwood and hardwood pulpwood, softwood veneer logs, softwood composite panels, and softwood used for other industrial products accounted for all of the increase. Nearly 89 percent of the total roundwood TPO was softwood. Output of hardwood saw logs dropped 19 percent to 10 million cubic feet, and hardwood veneer dropped 18 percent to slightly more than 2 million cubic feet.

Pulpwood is still the leading product in the Southeast Georgia Region, accounting for 47 percent of the region's total TPO and for 43 percent of the State's total roundwood pulpwood output. The 205 million cubic feet of saw logs accounted for 41 percent of the total roundwood output; this figure represents 41 percent of the State's total saw-log output. Only 16 percent of the veneer logs harvested in Georgia during 1992 came from the Southeast Region; however, almost 82 percent of the State's other industrial products came from this region. Of the 35 counties in this area, 7 had production greater than 20 million cubic feet, 17 had production greater than 10 million cubic feet, and only 3 had production less than 5 million cubic feet (table 15). Only one of the highest producing counties was north of the Altamaha River. About two-thirds of the softwood production and half of the hardwood production came from the counties south of the Altamaha river. The Southeast Region had 67 primary wood-using plants operating during 1992, 8 more than in 1989: 6 pulpmills, 36 sawmills, 3 veneer or plywood mills, 20 pole or post mills, and 2 other miscellaneous mills (fig. 5). These mills processed 41 percent of the State's total roundwood output.

Southwest Region

In 1992, almost 157 million cubic feet of roundwood were produced in the 22 counties making up the Southwest Region of Georgia. This total reflects an increase of more than 3 percent between 1989 and 1992 (table 16). The region ranks third in the State in the production of roundwood products, with 13 percent of the total output. Softwood production increased less than 1 percent, but still accounted for 84 percent of the total roundwood output. Hardwood output for all products increased nearly 22 percent, with the largest increases in veneer and pulpwood production.

Saw-log production of more than 73 million cubic feet accounted for nearly half of the total roundwood production for this area. The Southwest Region was the only region where saw-log production exceeded pulpwood production. Production of pulpwood fell by 18 percent and accounted for 36 percent of the region's total roundwood output. This region produced 14 percent of the State's saw logs, 12 percent of the veneer logs, 10 percent of the pulpwood, 24 percent of the composite panel production, and 13 percent of the roundwood used for other industrial products. Only 5 counties in the 22-county area had production greater than 10 million cubic feet (table 17). The Southwest Region had 36 primary wood-using plants operating in 1992, 5 more than in 1989: 23 sawmills, 2 pulpmills, 4 veneer or plywood plants, 2 OSB mills, and 5 pole or post mills.

Central Region

In 1992, roundwood output from the 49 counties making up the Central Georgia Region totaled 352 million cubic feet, up nearly 12 percent from 1989 (table 18). The region ranks second in the State in roundwood production, with 29 percent of the total roundwood TPO. Softwood production increased almost 15 percent, and accounted for 76 percent of the total roundwood output for the area. Hardwood output for all products increased nearly 3 percent. Almost all of the 12-percent drop in output of hardwood saw logs was offset by the increase in hardwood veneer production. The Central Region accounted for more than 41 percent of the State's total hardwood production.

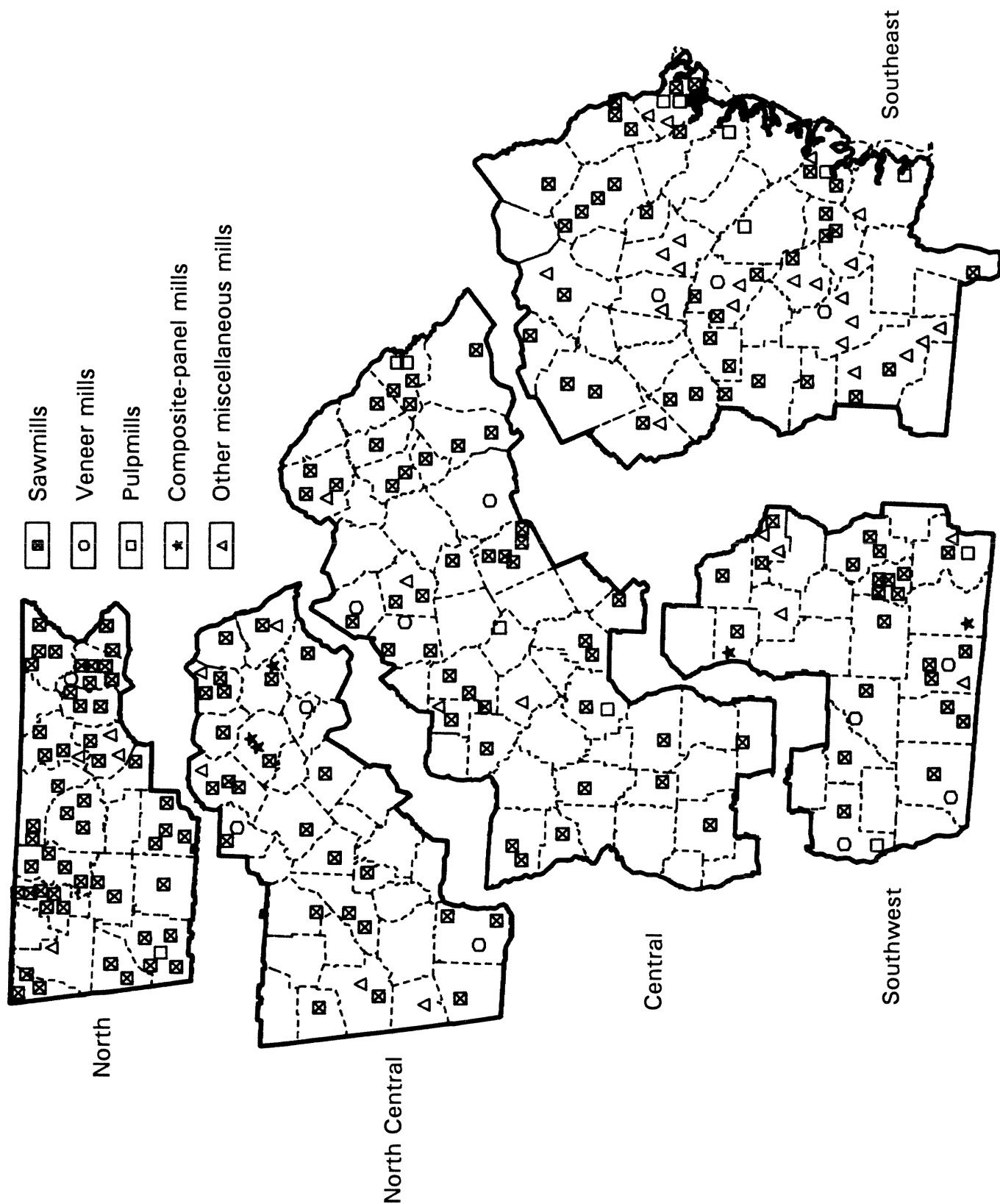


Figure 5—Primary wood-using mills by regions.

Pulpwood was the leading product in the Central Georgia Region, accounting for 46 percent of the total TPO. Pulpwood production increased by 17 percent from 140 to 163 million cubic feet. Saw-log production of more than 145 million cubic feet accounted for another 41 percent of the region's total roundwood output. Although veneer-log output declined by 3 percent, nearly half of the roundwood cut for veneer came from Central Georgia. This region also produced about 29 percent of the State's saw logs, 30 percent of the pulpwood, 13 percent of the composite panel production, and 3 percent of the roundwood used for other industrial products. Of the 49 counties in the area, 13 had production greater than 10 million cubic feet (table 19). The 53 mills operating in the Central Georgia Region in 1992 included 42 sawmills, 4 pulpmills, 3 veneer or plywood mills, 1 pole mill, and 3 other miscellaneous mills.

North Central Region

In 1992, roundwood output from the 32 counties making up the North Central Georgia Region increased more than 3 percent to 151 million cubic feet (table 20). The region produced 12 percent of the State's total roundwood TPO. Softwood production declined 1 percent to 124 million cubic feet and accounted for 82 percent of the total roundwood output. In contrast, total hardwood output increased 31 percent, with increases recorded for all products.

Saw-log production increased 14 percent to 52 million cubic feet, accounting for 35 percent of the total roundwood production for this area. Production of pulpwood fell by 6 percent and accounted for 37 percent of the region's total roundwood output. This region produced 10 percent of the State's saw logs, 22 percent of the veneer logs, 10 percent of the pulpwood, 58 percent of the composite panel production, and 1 percent of the roundwood used for other industrial products. Half of the 32 counties in this area had production between 5 and 10 million cubic feet, while only 1 had production greater than 10 million cubic feet (table 21). North Central Georgia had 36 primary wood-using plants operating in 1992, 2 more than in 1989: 25 sawmills, 3 veneer or plywood plants, 2 OSB mills, and 6 other miscellaneous mills.

Northern Region

Roundwood output from the 21 counties making up the North Georgia Region declined more than 2 percent to 70 million cubic feet (table 22). The region produced 6 percent of the total roundwood TPO. Softwood production declined 5 percent to 55 million cubic feet and

accounted for 79 percent of the total roundwood output. Total hardwood output increased 9 percent, with the largest absolute increases in hardwood saw logs and other industrial products.

Saw-log production declined 3 percent to 30 million cubic feet, accounting for 43 percent of the total roundwood production for this area. Production of pulpwood was down by 1 percent and accounted for 52 percent of the region's total roundwood output. This region produced 6 percent of the State's saw logs, 7 percent of the pulpwood, 4 percent of the composite panel production, and 1 percent of the roundwood used for other industrial products. Only 2 of the 21 counties in this area had production greater than 5 million cubic feet (table 23). North Georgia had 58 primary wood-using plants operating in 1992, 6 more than in 1989: 52 sawmills, 1 veneer mill, 1 pulpmill, and 4 other miscellaneous mills.

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Definitions

Board feet. Unit of measure applied to roundwood. It relates to lumber that is 1 foot long, 1 foot wide, and 1 inch thick (or its equivalent).

Composite panels. Consists of structural panels (oriented strand board or waferboard), particleboard (industrial underlayment, thin panelboard).

Consumption. The quantity of a commodity, such as pulpwood, utilized.

Drain. The volume of roundwood removed from any geographic area where timber is grown.

Exports. The volume of roundwood utilized by mills outside the State where timber was cut.

Industrial roundwood products. Any primary use of the main stem of a tree, such as saw logs, poles, pilings, veneer logs, pulpwood, posts, or cooperage logs.

Industrial fuelwood. A roundwood product, with or without bark, used to generate energy at a manufacturing facility such as a wood-using mill.

Imports. The volume of roundwood delivered to a mill or group of mills in a specific State but harvested from outside that particular area.

Plant residues. Wood material generated in the production of timber products at primary manufacturing plants.

Coarse residues. Suitable for chipping such as slabs, edgings, trim, veneer cores, and ends.

Fine residues. Not suitable for chipping such as sawdust, shavings, and veneer clippings.

Log. A primary forest product harvested in long, primarily 8-foot lengths.

Primary wood-using plants. Industries that receive roundwood or chips from roundwood for the manufacture of products such as veneer, pulp, and lumber.

Production. The total volume of roundwood harvested from land within the specified State, regardless of where consumed. Production is the sum of timber harvested and used within the State, plus all roundwood exported to other U.S. States.

Pulpwood. A roundwood product that will be reduced to individual wood fibers by chemical or mechanical means. The fibers are used to make a broad generic group of pulp products that includes paper products as well as chipboard, fiberboard, insulating board, and paperboard.

Receipts. The quantity or volume of industrial roundwood received at a mill or by a group of mills in a State, regardless of the geographic source. Volume of roundwood receipts is equal to the volume of roundwood retained in a State plus roundwood imported from other U.S. States.

Retained. Roundwood volume harvested from and processed by mills within the same State.

Roundwood. Logs, bolts, or other round sections cut from trees for industrial manufacture or consumer use.

Roundwood chipped. Any timber cut primarily for industrial manufacture, delivered to non-pulpmills, chipped, and then sold to pulpmills for use as fiber. Includes tops, jump sections, and whole trees.

Roundwood product drain. That portion of total drain used for a product.

Saw log. A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with minimum diameter inside bark of 6 inches for softwoods and 8 inches for hardwoods.

Standard cord. A unit measure applied to roundwood, usually bolts or split wood. It relates to a stack of wood 4 feet high, 4 feet wide, and 8 feet long—encompassing 128 cubic feet of wood, bark, and air space. In Georgia this usually translates to 74.5 cubic feet of solid wood for pulpwood, since pulpwood is more uniform.

Timber products output. Roundwood production in an area's forests (equals roundwood product drain).

Timber removals. The merchantable volume of trees removed from the timberland inventory by harvesting, cultural operations such as stand improvement, land clearing, or changes in land use.

Veneer log. Logs to be used in the production of plywood, finished panels, or veneer sheets, both rotary cut and sliced.

Conversion Factors^a

Saw Logs

Softwood	0.18018 cubic foot = 1 board foot 5.55 board feet = 1 cubic foot
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Hardwood	0.16531 cubic foot = 1 board foot 6.05 board feet = 1 cubic foot
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Veneer Logs

Softwood	0.17493 cubic foot = 1 board foot 5.72 board feet = 1 cubic foot
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Hardwood	0.16050 cubic foot = 1 board foot 6.23 board feet = 1 cubic foot
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Pulpwood^b

Softwood	70.5 cubic feet/cord
Hardwood	70.5 cubic feet/cord

^aConversion factors vary with stem size (d.b.h.) and species. The factors shown are for trees of average diameters removed in Georgia during the latest survey period.

^b Cubic feet of solid wood per cord.

Table 1 – Roundwood timber products output, by product and species group, Georgia, 1989 and 1992

Product and species group	Year		Change	Percent change
	1989	1992		
Thousand cubic feet				
Saw logs				
Softwood	408,489	444,044	+35,555	+8.7
Hardwood	65,678	62,341	−3,337	−5.1
Total	474,167	506,385	+32,218	+6.8
Veneer logs				
Softwood	69,077	54,849	−14,228	−20.6
Hardwood	12,863	17,756	+4,893	+38.0
Total	81,940	72,605	−9,335	−11.4
Pulpwood ^a				
Softwood	407,876	427,816	+19,940	+4.9
Hardwood	107,987	120,039	+12,052	+11.2
Total	515,863	547,855	+31,992	+6.2
Composite panels				
Softwood	19,672	38,360	+18,688	+95.0
Hardwood	6,880	6,588	−292	−4.2
Total	26,552	44,948	+18,396	+69.3
Other industrial				
Softwood	15,061	57,239	+42,178	+280.0
Hardwood	11	889	+878	+7,981.8
Total	15,072	58,128	+43,056	+285.7
All industrial				
Softwood	920,175	1,022,308	+102,133	+11.1
Hardwood	193,419	207,613	+14,194	+7.3
Total	1,113,594	1,229,921	+116,327	+10.4

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (50,716,000 cubic feet in 1989 and 30,898,000 cubic feet in 1992).

Table 2—Number of primary wood—using plants, by industry, Georgia, 1971–1992

Industry	Year							
	1971	1974	1977	1980	1983	1986	1989	1992
	<i>Number</i>							
Sawmills	301	301	280	265	222	239	172	178
Veneer mills	23	24	23	22	19	18	16	14
Pulpmills	15	15	15	15	15	15	14	13
Composite panel mills	0	0	0	0	0	0	3	4
Other mills	29	26	26	25	28	29	26	41
All plants	368	366	344	327	284	301	231	250

Table 3—Roundwood receipts, by product and species group, Georgia, 1989 and 1992

Product and species group	Year		Change	Percent change
	1989	1992		
Thousand cubic feet				
Saw logs				
Softwood	414,217	476,183	+61,966	+15.0
Hardwood	65,215	61,182	-4,033	-6.2
Total	479,432	537,365	+57,933	+12.1
Veneer logs				
Softwood	63,488	54,550	-8,938	-14.1
Hardwood	14,655	19,320	+4,665	+31.8
Total	78,143	73,870	-4,273	-5.5
Pulpwood ^a				
Softwood	409,419	431,378	+21,959	+5.4
Hardwood	125,420	130,129	+4,709	+3.8
Total	534,839	561,507	+26,668	+5.0
Composite panels				
Softwood	19,978	38,733	+18,755	+93.9
Hardwood	7,759	9,094	+1,335	+17.2
Total	27,737	47,827	+20,090	+72.4
Other industrial				
Softwood	15,174	60,915	+45,741	+301.4
Hardwood	10	889	+879	+8,790.0
Total	15,184	61,804	+46,620	+307.0
All industrial				
Softwood	922,276	1,061,759	+139,483	+15.1
Hardwood	213,059	220,614	+7,555	+3.5
Total	1,135,335	1,282,373	+147,038	+13.0

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (54,127,000 cubic feet in 1989 and 31,990,000 cubic feet in 1992).

Table 4—Roundwood receipts, by species and type of mill, Georgia, 1992

Species	Type of mill						
	All mills	Sawmills	Veneer mills		OSB and panels ^a	Pulpmills ^b	Other mills
			Pine plywood	Other veneer			
	Thousand cubic feet						
Softwood							
Yellow pine	621,436	469,441	54,446	104	37,666	NA	59,779
White pine	2,736	2,697	0	0	0	NA	39
Cypress	4,152	4,045	0	0	0	NA	107
Other softwood	2,057	0	0	0	1,067	NA	990
Unclassified	431,378	0	0	0	0	431,378	0
Total softwoods	1,061,759	476,183	54,446	104	38,733	431,378	60,915
Hardwood							
Gum	25,358	12,185	4,590	2,315	6,268	NA	0
Yellow—poplar	23,998	11,133	7,790	3,349	1,726	NA	0
Other soft hardwoods	3,577	2,206	0	271	1,100	NA	0
Oaks	30,347	28,996	0	870	0	NA	481
Hickory	4,506	4,098	0	0	0	NA	408
Other hard hardwoods	2,699	2,564	0	135	0	NA	0
Unclassified	130,129	0	0	0	0	130,129	0
Total hardwoods	220,614	61,182	12,380	6,940	9,094	130,129	889
All species	1,282,373	537,365	66,826	7,044	47,827	561,507	61,804

NA = not applicable.

^a OSB = oriented strand board.

^b Only collected by softwood and hardwood and includes roundwood chipped.

Table 5—Industrial roundwood movement, by year and species group, Georgia, 1989 and 1992

Year	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
SOFTWOOD					
1989	920,175	95,162	825,013	97,263	922,276
1992	1,022,308	105,563	916,745	145,014	1,061,759
HARDWOOD					
1989	193,419	19,165	174,254	38,805	213,059
1992	207,613	28,324	179,289	41,325	220,614
ALL SPECIES					
1989	1,113,594	114,327	999,267	136,068	1,135,335
1992	1,229,921	133,887	1,096,034	186,339	1,282,373

Table 6— Industrial roundwood movement, by product and species group, Georgia, 1992

Product and species group	Production	Exported to other States	Retained	Imported from other States	Receipts
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	444,044	11,042	433,002	43,181	476,183
Hardwood	62,341	3,546	58,795	2,387	61,182
Total	506,385	14,588	491,797	45,568	537,365
Veneer logs					
Softwood	54,849	6,334	48,515	6,035	54,550
Hardwood	17,756	532	17,224	2,096	19,320
Total	72,605	6,866	65,739	8,131	73,870
Pulpwood^a					
Softwood	427,816	85,961	341,855	89,523	431,378
Hardwood	120,039	24,246	95,793	34,336	130,129
Total	547,855	110,207	437,648	123,859	561,507
Composite panels					
Softwood	38,360	0	38,360	373	38,733
Hardwood	6,588	0	6,588	2,506	9,094
Total	44,948	0	44,948	2,879	47,827
Other industrial					
Softwood	57,239	2,226	55,013	5,902	60,915
Hardwood	889	0	889	0	889
Total	58,128	2,226	55,902	5,902	61,804
All products					
Softwood	1,022,308	105,563	916,745	145,014	1,061,759
Hardwood	207,613	28,324	179,289	41,325	220,614
Total	1,229,921	133,887	1,096,034	186,339	1,282,373

^a Includes roundwood chipped.

Table 7—Saw-log volume, by destination, source, and species group, Georgia, 1992

Destination and source	Species group		
	All species	Softwood	Hardwood
<i>Thousand cubic feet</i>			
Georgia (retained)	491,797	433,002	58,795
Exports to:			
Florida	5,777	5,463	314
North Carolina	1,851	616	1,235
South Carolina	6,960	4,963	1,997
Total	14,588	11,042	3,546
Imports from:			
Alabama	7,436	6,042	1,394
Florida	13,367	12,774	593
North Carolina	3	0	3
South Carolina	24,019	23,855	164
Tennessee	743	510	233
Total	45,568	43,181	2,387

Table 8—Veneer volume, by destination, source, and species group, Georgia, 1992

Destination and source	Species group		
	All species	Softwood	Hardwood
<i>Thousand cubic feet</i>			
Georgia (retained)	65,739	48,515	17,224
Exports to:			
Florida	6,457	6,334	123
North Carolina	218	0	218
South Carolina	191	0	191
Total	6,866	6,334	532
Imports from:			
Alabama	4,590	3,124	1,466
Florida	3,131	2,911	220
North Carolina	205	0	205
South Carolina	205	0	205
Total	8,131	6,035	2,096

Table 9—Pulpwood volume, by destination, source, and species group, Georgia, 1992^a

Destination and source	Species group		
	All species	Softwood	Hardwood
<i>Thousand cubic feet</i>			
Georgia (retained)	437,648	341,855	95,793
Exports to:			
Alabama	36,837	22,235	14,602
Florida	56,747	49,827	6,920
North Carolina	3,723	2,146	1,577
South Carolina	1,007	244	763
Tennessee	11,893	11,509	384
Total	110,207	85,961	24,246
Imports from:			
Alabama	51,863	43,754	8,109
Florida	32,834	24,858	7,976
Mississippi	114	0	114
South Carolina	38,171	20,691	17,480
Tennessee	255	220	35
Virginia	622	0	622
Total	123,859	89,523	34,336

^a Includes roundwood chipped that was delivered to non-pulpmills and then chipped and sold to pulpmills.

Table 10—Composite panel volume, by destination, source, and species group, Georgia, 1992

Destination and source	Species group		
	All species	Softwood	Hardwood
<i>Thousand cubic feet</i>			
Georgia (retained)	44,948	38,360	6,588
Exports to:	0	0	0
Imports from:			
Florida	2,879	373	2,506

Table 11—Other industrial volume, by destination, source, and species group, Georgia, 1992^a

Destination and source	Species group		
	All species	Softwood	Hardwood
<i>Thousand cubic feet</i>			
Georgia (retained)	55,902	55,013	889
Exports to:			
Florida	1,952	1,952	0
South Carolina	274	274	0
Total	2,226	2,226	0
Imports from:			
Alabama	47	47	0
Florida	4,532	4,532	0
South Carolina	1,323	1,323	0
Total	5,902	5,902	0

^a Includes poles, posts, mulch, firewood, log homes, charcoal, and all other industrial mills.

Table 12—Primary mill residue volume, by roundwood type, species group, and residue type, Georgia, 1992

Roundwood type and species group	Residue type				
	All types	Bark	Coarse	Sawdust	Shavings
<i>Thousand cubic feet</i>					
Saw logs					
Softwood	296,257	42,771	142,596	69,965	40,926
Hardwood	38,848	7,248	18,127	13,159	314
Total	335,105	50,019	160,723	83,124	41,240
Veneer logs					
Softwood	34,272	4,592	17,165	12,515	0
Hardwood	11,179	1,870	4,475	4,834	0
Total	45,451	6,462	21,640	17,349	0
Pulpwood					
Softwood	41,464	41,464	0	0	0
Hardwood	13,753	13,753	0	0	0
Total	55,217	55,217	0	0	0
Composite panels					
Softwood	8,413	8,413	0	0	0
Hardwood	2,612	2,612	0	0	0
Total	11,025	11,025	0	0	0
Other industrial^a					
Softwood	77,436	47,482	29,632	321	0
Hardwood	506	112	283	111	0
Total	77,942	47,594	29,916	432	0
Total					
Softwood	457,842	144,722	189,393	82,801	40,926
Hardwood	66,898	25,595	22,885	18,104	314
Total	524,740	170,317	212,278	100,905	41,240

^a Includes poles, pilings, posts, and other industrial products.

Table 13—Disposal of residue at primary wood—using plants, by product, species group, and type of residue, Georgia, 1989 and 1992

Product and species group	All types		Bark		Coarse		Sawdust		Shavings	
	1989	1992	1989	1992	1989	1992	1989	1992	1989	1992
<i>Thousand cubic feet</i>										
Fiber products										
Softwood	127,602	157,492	107	0	127,460	150,156	0	6,170	35	1,166
Hardwood	16,544	15,627	0	0	16,544	15,616	0	0	0	11
Total	144,146	173,119	107	0	144,004	165,772	0	6,170	35	1,177
Particleboard										
Softwood	24,218	32,175	0	0	17	456	5,467	9,575	18,734	22,144
Hardwood	30	219	0	0	0	0	0	167	30	52
Total	24,248	32,394	0	0	17	456	5,467	9,742	18,764	22,196
Composite panels										
Softwood	0	0	0	0	0	0	0	0	0	0
Hardwood	0	8	0	0	0	8	0	0	0	0
Total	0	8	0	0	0	8	0	0	0	0
Sawn products										
Softwood	8,703	7,863	0	0	8,703	7,863	0	0	0	0
Hardwood	425	2,971	0	0	425	2,971	0	0	0	0
Total	9,128	10,834	0	0	9,128	10,834	0	0	0	0
Fuel										
Softwood	171,151	230,318	85,098	126,091	7,225	27,593	67,123	62,604	11,705	14,030
Hardwood	40,881	43,001	22,375	22,280	2,722	3,687	15,247	16,814	537	220
Total	212,032	273,319	107,473	148,371	9,947	31,280	82,370	79,418	12,242	14,250
Miscellaneous										
Softwood	16,179	28,476	10,703	18,034	917	2,712	1,544	4,144	3,015	3,586
Hardwood	1,329	4,673	510	3,212	33	500	685	930	101	31
Total	17,508	33,149	11,213	21,246	950	3,212	2,229	5,074	3,116	3,617
Not used										
Softwood	1,882	1,518	611	597	891	613	380	308	0	0
Hardwood	1,141	399	473	103	123	103	545	193	0	0
Total	3,023	1,917	1,084	700	1,014	716	925	501	0	0
All products										
Softwood	349,735	457,842	96,519	144,722	145,213	189,393	74,514	82,801	33,489	40,926
Hardwood	60,350	66,898	23,358	25,595	19,847	22,885	16,477	18,104	668	314
Total	410,085	524,740	119,877	170,317	165,060	212,278	90,991	100,905	34,157	41,240

Table 14--Roundwood timber products output, by product and species group, Southeast Georgia, 1989 and 1992

Product and species group	Year		Change	Percent change
	1989	1992		
Thousand cubic feet				
Saw logs				
Softwood	185,665	194,771	+9,106	+4.9
Hardwood	12,938	10,464	-2,474	-19.1
Total	198,603	205,235	+6,632	+3.3
Veneer logs				
Softwood	6,507	9,785	+3,278	+50.4
Hardwood	2,507	2,053	-454	-18.1
Total	9,014	11,838	+2,824	+31.3
Pulpwood ^a				
Softwood	171,051	192,199	+21,148	+12.4
Hardwood	40,287	43,777	+3,490	+8.7
Total	211,338	235,976	+24,638	+11.7
Composite panels				
Softwood	200	537	+337	+168.5
Hardwood	572	0	-572	--
Total	772	537	-235	-30.4
Other industrial				
Softwood	10,453	47,436	+36,983	+353.8
Hardwood	0	0	0	--
Total	10,453	47,436	+36,983	+353.8
All industrial				
Softwood	373,876	444,728	+70,852	+19.0
Hardwood	56,304	56,294	-10	--
Total	430,180	501,022	+70,842	+16.5

-- = negligible.

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (28,317,000 cubic feet in 1989 and 17,060,000 cubic feet in 1992).

Table 15--Roundwood timber products output, by county, product and species group, Southeast Georgia, 1992

County	All products		Saw logs		Veneer logs		Composite board		Pulpwood ^a		Other Industrial	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
	<i>Thousand cubic feet</i>											
Appling	22,318	940	6,342	0	547	32	0	0	9,781	908	5,648	0
Atkinson	13,190	67	6,723	0	782	0	0	0	2,452	67	3,233	0
Bacon	3,754	1,122	262	0	625	32	0	0	2,259	1,090	608	0
Brantley	18,327	1,433	5,174	4	0	0	0	0	9,512	1,429	3,641	0
Bryan	8,272	553	5,215	8	0	0	0	0	2,698	545	359	0
Bulloch	15,809	2,545	11,616	248	0	296	0	0	3,666	2,001	527	0
Camden	13,993	1,881	6,058	3	0	31	0	0	7,505	1,847	430	0
Candler	6,427	817	3,885	0	0	32	0	0	2,312	785	230	0
Charlton	23,660	3,440	6,751	0	818	31	0	0	13,701	3,409	2,390	0
Chatham	5,500	638	2,286	31	0	0	0	0	3,025	607	189	0
Clinch	38,116	533	7,767	0	1,967	31	0	0	18,251	502	10,131	0
Coffee	14,001	1,665	7,444	383	1,173	177	0	0	4,771	1,105	613	0
Dodge	13,143	2,706	6,141	959	2,454	0	537	0	3,761	1,747	250	0
Echols	19,106	896	4,796	106	794	31	0	0	13,196	759	320	0
Effingham	8,883	2,104	5,619	242	0	37	0	0	2,902	1,825	362	0
Emanuel	22,182	2,592	17,905	1,338	0	32	0	0	3,654	1,222	623	0
Evans	4,920	687	4,063	0	0	32	0	0	762	655	95	0
Glynn	12,046	4,038	4,759	0	0	0	0	0	6,983	4,038	304	0
Jeff Davis	11,951	2,382	5,936	580	0	32	0	0	5,603	1,770	412	0
Jenkins	4,690	2,053	3,189	446	0	177	0	0	1,410	1,430	91	0
Johnson	5,009	1,598	3,067	755	0	101	0	0	1,879	742	63	0
Laurens	13,365	2,958	8,805	1,407	0	104	0	0	4,487	1,447	73	0
Liberty	11,543	2,002	7,476	0	0	0	0	0	3,741	2,002	326	0
Long	11,748	1,945	6,259	185	0	32	0	0	5,352	1,728	137	0
McIntosh	9,047	1,912	3,395	511	0	0	0	0	5,555	1,401	97	0
Montgomery	2,604	1,420	1,463	556	0	150	0	0	939	714	202	0
Pierce	9,081	982	4,051	0	625	0	0	0	3,191	982	1,214	0
Screven	10,288	3,003	7,448	444	0	34	0	0	2,298	2,525	542	0
Tattnall	14,783	695	6,529	0	0	32	0	0	2,620	663	5,634	0
Telfair	8,028	1,265	1,658	621	0	32	0	0	6,094	612	276	0
Toombs	9,912	1,756	4,193	836	0	323	0	0	2,678	597	3,041	0
Treutlen	3,776	244	1,989	0	0	32	0	0	1,586	212	201	0
Ware	23,637	319	8,177	0	0	0	0	0	10,708	319	4,752	0
Wayne	29,196	1,559	7,751	0	0	0	0	0	21,260	1,559	185	0
Wheeler	2,423	1,544	579	801	0	210	0	0	1,607	533	237	0
All counties	444,728	56,294	194,771	10,464	9,785	2,053	537	0	192,199	43,777	47,436	0

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (17,060,000 cubic feet in 1992).

Table 16—Roundwood timber products output, by product and species group, Southwest Georgia, 1989 and 1992

Product and species group	Year		Change	Percent change
	1989	1992		
Thousand cubic feet				
Saw logs				
Softwood	59,782	67,051	+7,269	+12.2
Hardwood	5,606	6,294	+688	+12.3
Total	65,388	73,345	+7,957	+12.2
Veneer logs				
Softwood	8,676	6,617	-2,059	-23.7
Hardwood	928	2,142	+1,214	+130.8
Total	9,604	8,759	-845	-8.8
Pulpwood ^a				
Softwood	59,151	44,395	-14,756	-24.9
Hardwood	9,645	11,905	+2,260	+23.4
Total	68,796	56,300	-12,496	-18.2
Composite panels				
Softwood	1,500	6,170	+4,670	+311.3
Hardwood	4,292	4,550	+258	+6.0
Total	5,792	10,720	+4,928	+85.1
Other industrial				
Softwood	1,791	7,435	+5,644	+315.1
Hardwood	0	0	0	--
Total	1,791	7,435	+5,644	+315.1
All industrial				
Softwood	130,900	131,668	+768	+0.6
Hardwood	20,471	24,891	+4,420	+21.6
Total	151,371	156,559	+5,188	+3.4

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (8,966,000 cubic feet in 1989 and 2,408,000 cubic feet in 1992).

Table 17—Roundwood timber products output, by county, product and species group, Southwest Georgia, 1992

County	All products		Saw logs		Veneer logs		Composite board		Pulpwood ^a		Other Industrial	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
<i>Thousand cubic feet</i>												
Baker	1,274	229	126	144	264	0	0	0	884	85	0	0
Ben Hill	14,069	1,779	7,806	260	0	0	806	0	5,152	1,519	305	0
Berrien	14,231	1,445	9,294	250	547	65	67	920	1,365	210	2,958	0
Brooks	5,879	1,988	4,175	305	196	64	401	765	1,004	854	103	0
Colquitt	8,388	1,534	6,032	114	775	22	156	869	1,343	529	82	0
Cook	3,020	597	2,085	89	0	0	468	507	461	1	6	0
Crisp	4,325	797	1,760	37	0	0	1,075	0	1,437	760	53	0
Decatur	5,022	2,605	2,523	1,099	1,129	829	0	0	1,365	677	5	0
Dooly	2,918	409	1,485	359	107	0	268	0	1,058	50	0	0
Early	2,907	451	371	106	858	135	0	0	1,678	210	0	0
Grady	4,346	2,517	2,043	892	461	301	0	0	1,836	1,324	6	0
Irwin	4,926	230	2,694	121	0	0	268	0	1,743	109	221	0
Lanier	7,253	35	3,790	0	0	0	0	0	639	35	2,824	0
Lowndes	14,313	1,628	3,987	130	0	9	625	620	9,517	869	184	0
Miller	557	371	0	106	303	135	0	0	254	130	0	0
Mitchell	5,118	1,803	1,328	347	932	42	0	0	2,853	1,414	5	0
Seminole	1,352	283	776	106	264	135	0	0	228	42	84	0
Thomas	7,197	3,224	3,600	387	303	197	156	869	3,126	1,771	12	0
Tift	3,079	440	1,848	28	107	0	537	0	505	412	82	0
Turner	3,753	322	1,726	125	0	0	537	0	1,308	197	182	0
Wilcox	8,236	962	4,055	711	107	0	0	0	3,830	251	244	0
Worth	9,505	1,242	5,547	578	264	208	806	0	2,809	456	79	0
All counties	131,668	24,891	67,051	6,294	6,617	2,142	6,170	4,550	44,395	11,905	7,435	0

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (2,408,000 cubic feet in 1992).

Table 18—Roundwood timber products output, by product and species group, Central Georgia, 1989 and 1992

Product and species group	Year		Change	Percent change
	1989	1992		
Thousand cubic feet				
Saw logs				
Softwood	100,297	116,134	+15,837	+15.8
Hardwood	32,907	29,128	−3,779	−11.5
Total	133,204	145,262	+12,058	+9.1
Veneer logs				
Softwood	31,652	27,009	−4,643	−14.7
Hardwood	5,170	8,811	+3,641	+70.4
Total	36,822	35,820	−1,002	−2.7
Pulpwood ^a				
Softwood	95,318	116,378	+21,060	+22.1
Hardwood	44,442	46,964	+2,522	+5.7
Total	139,760	163,342	+23,582	+16.9
Composite panels				
Softwood	4,044	5,498	+1,454	+36.0
Hardwood	423	228	−195	−46.1
Total	4,467	5,726	+1,259	+28.2
Other industrial				
Softwood	673	1,556	+883	+131.2
Hardwood	9	14	+5	+55.6
Total	682	1,570	+888	+130.2
All industrial				
Softwood	231,984	266,575	+34,591	+14.9
Hardwood	82,951	85,145	+2,194	+2.6
Total	314,935	351,720	+36,785	+11.7

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (6,689,000 cubic feet in 1989 and 6,565,000 cubic feet in 1992).

Table 19—Roundwood timber products output, by county, product and species group, Central Georgia, 1992

County	All products		Saw logs		Veneer logs		Composite board		Pulpwood ^a		Other Industrial	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
<i>Thousand cubic feet</i>												
Baldwin	5,455	1,459	2,209	298	838	708	0	0	2,408	453	0	0
Bibb	1,928	601	391	365	251	108	0	0	1,286	128	0	0
Bleckley	1,863	1,001	556	502	107	34	0	0	1,127	465	73	0
Burke	9,634	5,537	5,331	1,239	0	0	0	0	4,239	4,298	64	0
Butts	5,300	1,472	2,319	988	838	180	0	0	2,143	304	0	0
Calhoun	791	1,044	218	444	107	428	0	0	466	172	0	0
Chattahoochee	2,028	983	386	174	0	0	0	0	1,642	809	0	0
Clay	972	288	371	0	107	21	0	0	494	267	0	0
Columbia	3,622	757	2,846	184	0	0	0	0	776	573	0	0
Crawford	10,612	2,717	5,079	552	638	827	268	0	4,627	1,324	0	14
Dougherty	3,143	682	711	502	107	0	0	0	2,325	180	0	0
Glascocock	2,945	808	2,045	132	0	0	0	0	837	676	63	0
Greene	6,228	1,548	1,572	262	0	22	1,874	76	2,782	1,188	0	0
Hancock	6,540	2,244	2,746	402	0	0	0	0	3,794	1,842	0	0
Harris	5,978	1,959	1,525	314	852	253	0	0	3,601	1,392	0	0
Houston	4,329	1,567	737	1,231	107	0	0	0	3,485	336	0	0
Jasper	7,757	2,624	2,084	1,591	2,943	723	0	0	2,730	310	0	0
Jefferson	10,043	4,125	7,885	2,600	0	0	0	0	2,157	1,525	1	0
Jones	6,228	1,672	2,027	423	1,258	723	0	0	2,861	526	82	0
Lamar	10,290	1,440	3,352	1,077	107	13	0	0	6,633	350	198	0
Lee	2,909	470	1,949	308	107	0	0	0	847	162	6	0
Lincoln	3,664	1,715	3,016	55	0	0	0	0	648	1,660	0	0
McDuffie	5,275	1,786	4,079	884	0	0	0	0	1,196	902	0	0
Macon	3,414	1,817	1,522	1,371	107	0	0	0	1,785	446	0	0
Marion	6,112	1,606	911	229	107	0	0	0	5,094	1,377	0	0
Monroe	9,799	1,570	4,355	908	587	180	0	0	4,709	482	148	0
Morgan	14,349	704	2,348	460	9,270	22	1,379	76	1,325	146	27	0
Muscogee	2,077	1,364	387	142	638	827	0	0	1,052	395	0	0
Peach	1,938	553	948	425	0	0	0	0	990	128	0	0
Pike	4,250	1,617	2,222	665	746	827	0	0	1,134	125	148	0
Pulaski	2,638	860	1,675	769	107	0	0	0	783	91	73	0
Putnam	12,435	980	4,880	136	2,943	723	0	0	4,174	121	438	0
Quitman	1,965	412	557	0	107	0	0	0	1,301	412	0	0
Randolph	4,308	1,756	1,489	318	107	407	0	0	2,712	1,031	0	0
Richmond	3,238	1,500	2,281	577	0	0	0	0	957	923	0	0
Schley	2,642	987	932	312	107	0	0	0	1,603	675	0	0
Stewart	5,269	1,893	868	43	426	204	0	0	3,975	1,646	0	0
Sumter	3,551	1,267	1,611	290	107	0	0	0	1,833	977	0	0
Talbot	4,621	1,200	1,612	417	746	126	0	0	2,263	657	0	0
Taliaferro	2,363	1,702	1,729	205	0	0	0	0	634	1,497	0	0
Taylor	3,920	688	951	261	320	175	268	0	2,381	252	0	0
Terrell	2,075	855	776	287	107	0	0	0	1,192	568	0	0
Twiggs	8,823	2,471	3,674	1,156	419	129	0	0	4,730	1,186	0	0
Upson	8,890	1,726	4,809	525	746	827	0	0	3,187	374	148	0
Warren	6,027	3,135	4,049	681	0	9	0	0	1,978	2,445	0	0
Washington	10,823	4,722	7,830	1,626	0	173	0	0	2,930	2,923	63	0
Webster	5,034	1,261	932	206	107	0	0	0	3,995	1,055	0	0
Wilkes	10,684	4,223	4,971	362	0	34	1,709	76	3,980	3,751	24	0
Wilkinson	7,796	5,777	4,381	2,230	838	108	0	0	2,577	3,439	0	0
All counties	266,575	85,145	116,134	29,128	27,009	8,811	5,498	228	116,378	46,964	1,556	14

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (6,565,000 cubic feet in 1992).

Table 20—Roundwood timber products output, by product and species group, North Central Georgia, 1989 and 1992

Product and species group	Year		Change	Percent change
	1989	1992		
Thousand cubic feet				
Saw logs				
Softwood	38,712	43,666	+4,954	+12.8
Hardwood	7,005	8,548	+1,543	+22.0
Total	45,717	52,214	+6,497	+14.2
Veneer logs				
Softwood	22,242	11,438	−10,804	−48.6
Hardwood	3,658	4,242	+584	+16.0
Total	25,900	15,680	−10,220	−39.5
Pulpwood ^a				
Softwood	50,993	43,941	−7,052	−13.8
Hardwood	8,165	11,964	+3,799	+46.5
Total	59,158	55,905	−3,253	−5.5
Composite panels				
Softwood	11,703	24,555	+12,852	+109.8
Hardwood	1,491	1,682	+191	+12.8
Total	13,194	26,237	+13,043	+98.9
Other industrial				
Softwood	1,718	561	−1,157	−67.3
Hardwood	2	260	+258	—
Total	1,720	821	−899	−52.3
All industrial				
Softwood	125,368	124,161	−1,207	−1.0
Hardwood	20,321	26,696	+6,375	+31.4
Total	145,689	150,857	+5,168	+3.5

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (4,731,000 cubic feet in 1989 and 3,726,000 cubic feet in 1992).

Table 21—Roundwood timber products output, by county, product and species group, North Central Georgia, 1992

County	All products		Saw logs		Veneer logs		Composite board		Pulpwood ^a		Other Industrial	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
<i>Thousand cubic feet</i>												
Banks	6,223	833	2,724	428	0	63	2,566	181	933	151	0	10
Barrow	6,724	212	2,995	0	337	31	2,566	181	826	0	0	0
Carroll	6,012	1,393	2,355	287	319	126	0	0	3,338	751	0	229
Clarke	1,290	148	1,100	37	168	22	0	0	18	89	4	0
Clayton	1,499	55	1,376	30	0	0	0	0	123	25	0	0
Cobb	475	127	179	77	0	0	0	0	296	50	0	0
Coweta	7,054	1,264	2,765	617	639	204	0	0	3,650	443	0	0
De Kalb	431	30	60	17	0	0	0	0	371	13	0	0
Douglas	1,152	92	196	27	0	0	0	0	956	65	0	0
Elbert	5,212	1,859	1,661	341	0	31	2,632	181	857	1,306	62	0
Fayette	2,636	861	1,530	34	638	827	0	0	468	0	0	0
Forsyth	572	171	346	111	0	0	0	0	226	60	0	0
Franklin	4,557	825	1,244	360	0	63	2,368	181	906	221	39	0
Fulton	2,122	285	1,131	208	104	0	0	0	887	77	0	0
Gwinnett	1,051	188	168	59	0	31	0	0	883	98	0	0
Hall	6,324	813	1,325	447	0	41	2,368	181	2,631	124	0	20
Haralson	2,356	768	512	289	0	0	0	0	1,844	479	0	0
Hart	971	545	894	364	0	41	0	0	77	140	0	0
Heard	6,125	2,547	1,972	848	1,172	438	0	0	2,981	1,260	0	1
Henry	5,119	557	2,100	285	0	0	0	0	2,871	272	148	0
Jackson	5,816	438	1,080	10	674	22	2,566	181	1,496	225	0	0
Madison	4,739	331	916	19	674	22	2,764	181	361	109	24	0
Meriwether	11,620	3,004	5,395	805	1,385	504	0	0	4,790	1,695	50	0
Newton	2,318	698	0	284	1,681	397	0	0	637	17	0	0
Oconee	3,174	543	887	168	674	22	1,163	53	450	300	0	0
Oglethorpe	6,602	2,647	2,394	749	0	22	3,194	181	928	1,695	86	0
Paulding	2,972	262	504	0	0	0	0	0	2,468	262	0	0
Polk	4,618	422	2,108	55	0	0	0	0	2,510	367	0	0
Rockdale	69	0	0	0	0	0	0	0	69	0	0	0
Spalding	4,312	1,432	1,629	401	746	827	0	0	1,789	204	148	0
Troup	5,650	2,672	1,205	960	1,385	486	0	0	3,060	1,226	0	0
Walton	4,366	674	915	231	842	22	2,368	181	241	240	0	0
All counties	124,161	26,696	43,666	8,548	11,438	4,242	24,555	1,682	43,941	11,964	561	260

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (3,726,000 cubic feet in 1992).

Table 22—Roundwood timber products output, by product and species group, North Georgia, 1989 and 1992

Product and species group	Year		Change	Percent change
	1989	1992		
Thousand cubic feet				
Saw logs				
Softwood	24,033	22,422	-1,611	-6.7
Hardwood	7,222	7,907	+685	+9.5
Total	31,255	30,329	-926	-3.0
Veneer logs				
Softwood	0	0	0	--
Hardwood	600	508	-92	-15.3
Total	600	508	-92	-15.3
Pulpwood ^a				
Softwood	31,363	30,903	-460	-1.5
Hardwood	5,448	5,429	-19	-0.3
Total	36,811	36,332	-479	-1.3
Composite panels				
Softwood	2,225	1,600	-625	-28.1
Hardwood	102	128	+26	+25.5
Total	2,327	1,728	-599	-25.7
Other industrial				
Softwood	426	251	-175	-41.1
Hardwood	0	615	+615	--
Total	426	866	+440	+103.3
All industrial				
Softwood	58,047	55,176	-2,871	-4.9
Hardwood	13,372	14,587	+1,215	+9.1
Total	71,419	69,763	-1,656	-2.3

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (2,013,000 cubic feet in 1989 and 1,139,000 cubic feet in 1992).

Table 23—Roundwood timber products output, by county, product and species group, North Georgia, 1992

County	All products		Saw logs		Veneer logs		Composite board		Pulpwood ^a		Other Industrial	
	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
<i>Thousand cubic feet</i>												
Bartow	5,343	657	483	170	0	0	0	0	4,860	487	0	0
Catoosa	748	129	165	0	0	0	0	0	583	129	0	0
Chattooga	2,212	1,420	124	331	0	0	0	0	2,088	1,089	0	0
Cherokee	3,073	570	2,098	363	0	0	0	0	975	207	0	0
Dade	138	164	100	92	0	0	0	0	38	72	0	0
Dawson	1,816	302	662	158	0	0	0	0	1,154	144	0	0
Fannin	2,956	1,582	2,017	1,391	0	87	0	0	906	104	33	0
Floyd	12,384	1,747	3,100	761	0	0	0	0	9,284	986	0	0
Gilmer	2,803	1,422	1,364	1,191	0	71	0	0	1,439	160	0	0
Gordon	4,480	442	1,953	86	0	0	0	0	2,527	356	0	0
Habersham	3,656	688	2,111	374	0	41	1,402	128	143	135	0	10
Lumpkin	737	758	615	54	0	41	0	0	122	58	0	605
Murray	3,034	633	1,062	383	0	0	0	0	1,972	250	0	0
Pickens	856	221	381	112	0	0	0	0	475	109	0	0
Rabun	1,200	1,001	1,120	773	0	87	0	0	80	141	0	0
Stephens	1,498	790	1,197	552	0	41	198	0	93	197	10	0
Towns	266	439	154	271	0	41	0	0	79	127	33	0
Union	751	443	520	221	0	58	0	0	165	164	66	0
Walker	1,370	513	95	167	0	0	0	0	1,166	346	109	0
White	2,068	157	1,246	88	0	41	0	0	822	28	0	0
Whitfield	3,787	509	1,855	369	0	0	0	0	1,932	140	0	0
All counties	55,176	14,587	22,422	7,907	0	508	1,600	128	30,903	5,429	251	615

^a Includes roundwood that was delivered to non-pulpmills and then chipped and sold to pulpmills (1,139,000 cubic feet in 1992).

Johnson, Tony G. 1994. Georgia's timber industry: an assessment of timber product output and use, 1992. Resour. Bull. SE-144. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station. 32 pp.

In 1992, volume of roundwood products removed from Georgia's forests totaled 1.2 billion cubic feet—10 percent more than in 1989. Mill byproducts generated from primary manufacturers increased nearly 28 percent to 525 million cubic feet. Almost all of the plant residues were used, mostly for fuel and fiber products. Pulpwood was the leading roundwood product at 548 million cubic feet; saw logs ranked second at 506 million cubic feet; veneer logs were third with 73 million cubic feet. The number of primary processing plants increased from 231 in 1989 to 250 in 1992. Total receipts increased 13 percent to nearly 1.3 billion cubic feet.

KEYWORDS: Roundwood, residues, pulpwood, saw logs, veneer logs, wood movement.

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